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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,075	04/06/2001	Geoffrey Horne	A34160-065838.0282	7262

7590 10/03/2002  
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NEW YORK, NY 10112-4498

EXAMINER
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LEE, SIN J

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-5

<b>Office Action Summary</b>	<b>Application No.</b> 09/828,075	<b>Applicant(s)</b> HORNE ET AL.	
	<b>Examiner</b> Sin J Lee	<b>Art Unit</b> 1752	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 April 2001.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-22 is/are rejected.
- 7) ☒ Claim(s) 10 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
  - 1. ☐ Certified copies of the priority documents have been received.
  - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, applicants recite “wherein the polymeric substance *is selected from the group comprising* a phenolic resin *selected from the group consisting of . . .*”. This claim language is presenting uncertainty or ambiguity with respect to the question of scope or clarity of the claim. Besides, it is improper to use the term “is selected from the group *comprising*” instead of “is selected from the group *consisting of*.” See MPEP 2173.05(h) citing Ex parte Dotter, 12 USPQ 382 (Bd. App. 1931).

Appropriate correction is required. For the purpose of examining the claim on the merit, the Examiner assumed that applicants meant to say “wherein the polymeric substance comprises a phenolic resin selected from the group consisting of . . .”.

3. Claims 7 and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 7, 13, and 15 recite the limitation "the composition" in line 1. There is insufficient antecedent basis for this limitation in the claim. ✓

Appropriate correction is required. For the purpose of examining the claims on the merit, the Examiner assumed that applicants meant to say "the coating" instead of "the composition". ✓

4. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "the functional groups" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required. For the purpose of examining the claim on the merit, the Examiner interpreted "the functional groups" to mean the colorant groups, which also act as infra-red absorbing groups and reversible insolubilizer groups. ✓

5. Claim 14 is objected to because of the following informalities: Applicants need to delete - naphtoflavone in line 3 since that term is appearing twice in the claim. Appropriate correction is required. ✓

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-6, 8, 9, 11, 12, 17-19, 21, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Nguyen (6,124,425).

Nguyen teaches (col.3, lines 18-57, col.4, lines 1-57, col.5, lines 1-27) a thermally reactive near infrared absorption polymer having a *near infrared absorption chromophoric* moiety (their R2 group in Formula II to V) comprising derivatives of indole, benzindole, benzothiazole, naphthothiazole, benzoxazole, naphthoxazole, benzselenazole, or naphthoselenazole, which can be represented by their Formula VI. Nguyen teaches (col.1, lines 12-15) that his polymer is particularly useful in the preparation of *lithographic printing plates*.

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In Example 15, Nguyen specifically synthesizes a near infrared absorption polymer ADS819PO which chemical structure is shown in col.24 by reacting *Novolak resin* and 2-[2-[2-chloro-3-[2-(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)ethylidene]-1-cyclohexene-1-yl]ethenyl]-1,3,3-trimethyl-1H-benz[e]indolium 4-methylbenzenesulfonate. Therefore, the prior art teaches present polymeric substance comprising colorant groups. Nguyen furthermore teaches (see col.25, lines 43-50) that a coating solution made of their polymer is spin coated onto an electrolytically grained aluminum substrate, which was treated with polyvinyl phosphoric acid, and then dried. In present specification, pg.1, [0003], applicants state that typically, an aluminum sheet for lithographic printing form precursors, after being subjected to a graining treatment (which may be an *electrograining treatment*), is anodized using *phosphoric acid* electrolyte and then a post anodic treatment is carried out using a silicate or a phosphate composition. Since Nguyen teaches an aluminum substrate which is electrolytically grained and treated with polyvinyl phosphoric acid (there is no mention of carrying out post anodic treatment, for example, by using a silicate or a phosphate composition), the prior art teaches present aluminum support which is anodized but not subsequently modified by means of a post-anodic treatment compound. Also, Nguyen's polymer solution does not contain any free colorant dye. Therefore, the prior art teaches present inventions of claims 1-3, 5, 6, and 17.

With respect to present claim 4, although the polymer made in Example 15 contains the chromophoric moiety having two naphthyl rings, in col.5, lines 1-16, Nguyen teaches that Z1 and Z2 in their Formula VI can represent *either* phenyl *or* naphthyl ring. Therefore, one of ordinary

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skill in the art would immediately envisage the polymer of Example 15 to have the chromophoric moiety having two phenyl rings instead of the naphthyl rings. Therefore, the prior art teaches present colorant group derived from the dye structure shown at the end of claim 4, and thus the prior art teaches present invention of claim 4.

With respect to present claims 8, 9, 11, and 12, since Nguyen's polymer of Example 15 contains *polymethine dye* structure in it, the prior art teaches present polymeric substance comprising colorant groups, which also act as infra-red absorbing groups and which also act as reversible insolubilizer groups. Therefore, the prior art teaches present inventions of claims 8, 9, 11, and 12.

Nguyen teaches that after the polymer-coating solution is spin coated onto the aluminum substrate and dried, the plate is imaged with a Creo Trendsetter image setter (a laser imaging device) and then the exposed area of the imaged plate is developed with a positive aqueous developer to produce a high resolution printing plate. Therefore, the prior art teaches present inventions of claims 18, 19, and 22.

With respect to present claim 21, since Nguyen's polymer of Example 15 is thermally reactive near infrared absorption polymer which has a strong absorption band having a maximum at around 825 nm, one of ordinary skill in the art would immediately envisage using electromagnetic radiation having that wavelength for the exposure step, and thus the prior art teaches present invention of claim 21.

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9. Claims 7, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen (6,124,425) in view of Suezawa et al (6,014,191) (with Kamir et al (6,447,895 B1) and Boulos et al (6,170,292 B1) which are cited to prove that iron oxide and manganese oxide are infrared absorbing materials).

With respect to present claims 15 and 16, Nguyen's thermally reactive near infrared absorption polymer coating does not contain any pigment. Suezawa et al teaches (col.6, lines 26-27, col.8, lines 21-34, lines 44-52) that when a light-heat converting material such as *polymethine dye* is used, one can further improve the adding effect of such light-heat converting material by adding additives such as a black pigment, green pigment, metal oxide such as iron oxide or manganese oxide, metal hydroxide, metal sulfate, and metal powder of bismuth, tin or tellurium. Since there are not that many examples to choose from, it is the Examiner's position that it would have been obvious to one of ordinary skill in the art to add *iron oxide* or *manganese oxide* into Nguyen's thermally reactive near infrared absorption polymer coating with a reasonable expectation of further improving the effect of Nguyen's infrared absorption chromophoric moiety which has the polymethine dye structure as taught by Suezawa. Therefore, Nguyen in view of Suezawa would render obvious present inventions of claims 15 and 16.

With respect to present claim 7, as evidenced by Kamir et al, col.3, lines 23-26 and Boulos et al, col.2, lines 10-15, both iron oxide and manganese oxide are infrared absorbing materials, and thus Nguyen in view of Suezawa would also render obvious present invention of claim 7.



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10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen (6,124,425) in view of McCullough et al (WO 99/01795).

As discussed above in Paragraph 8, Nguyen uses the Creo Trendsetter image setter (which is a laser imaging device) for the exposure step for their thermally reactive near infrared absorption polymer coating. McCullough et al teaches (see pg.20, lines 33-35, pg.21, lines 1-29, pg.22, lines 10-12) the equivalence of using a laser and using a heat stylus in delivering heat patternwise to a heat sensitive composition. Since the prior art teaches the equivalence of using these two equipments in delivering heat patternwise to a heat sensitive composition, it would have been obvious to one of ordinary skill in the art to use a heat stylus for Nguyen's imagewise exposure step with a reasonable expectation that using the heat stylus would successfully imagewise expose Nguyen's thermally reactive near infrared absorption polymer coating. Therefore, Nguyen in view of McCullough et al would render obvious present invention of claim 20.

11. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Nguyen does not teach or suggest the presently claimed reversible insolubilizer groups of claim (10.)

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is (703) 305-0504. The examiner can normally be reached on Monday-Friday from 8:30 am EST to 5:00 pm EST.

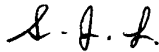
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Janet Baxter, can be reached on (703) 308-2303. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9311 for after final responses or (703) 872-9310 for before final responses.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.



S. Lee  
September 29, 2002



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